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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Tsuyoshi Miura

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06/17/2005

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EXAMINER

JERABEK, KELLY L

ART UNIT

PAPER NUMBER

2612

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/821,439	Applicant(s) MIURA ET AL.	
	Examiner Kelly L. Jerabek	Art Unit 2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-5 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 3/3/2005 have been fully considered but they are not persuasive.

Response to Remarks:

Applicant's arguments (Amendment pages 5-6) state that the combination of the Sugimoto and Tsuji references fails to teach or suggest all the features of amended claim 1. The Examiner respectfully disagrees. Sugimoto discloses in figure 1 a digital camera (10) having a flash unit (38) that determines proper flash duration through an assessment of image luminance. The camera (10) includes a light emission unit (38) having at least one light-emitting element, and a microcomputer (32) that acts as an emission control unit for controlling the light-emitting element (38) (col. 7, lines 63-67). The camera (10) also includes an image-signal acquiring unit (14) for performing analog-to-digital conversion of the image to generate a digitized image signal and store the digitized image signal (col. 5, lines 39-44). The camera includes a weighting circuit (22) to which one weighting amount table (28,30) is applied (col. 6, line 61 – col. 7, line 29). The weighting amount tables (28,30) apply weighting amount data (K) to different areas of the screen in order to suppress disturbances (areas of high luminance light

Art Unit: 2612

source) in the image (col. 7, lines 1-7; lines 21-29). Next, an integrator (24) calculates a total sum of luminance data equal to one screen (col. 7, lines 36-40) and calculator (26) normalizes the integrated value to generate a luminance evaluation value (V_y) (col. 7, lines 43-47). A microcomputer (32) compares the luminance evaluation value (V_y) with a target evaluation value (V_t) and causes that flash lamp (38) to emit light if needed (col. 9, lines 21-67; col. 10, lines 1-12). **The microcomputer (32) controls the shutter speed so that the luminance evaluation value (V_y) is consistent with the target evaluation value (V_t) (col. 9, lines 21-49). The microcomputer (32) also determines if the calculated shutter speed is lower than the minimum shutter speed (1/30 sec.) and in a case where the calculated shutter speed is lower than the minimum the shutter speed is forcedly set into the minimum value (col. 9, lines 33-49). Next, it is determined if the most suitable exposure is obtained at the controlled shutter speed and a light-emission is either performed (in accordance with calculated light-emission amount Q) or not performed depending on whether or not a suitable exposure is obtained (col. 10, lines 1-12). The controlled shutter speed and light emission are then used to take a picture of the object at the most suitable exposure and the image data obtained is stored into the recording medium (44) (col. 9, line 21 – col. 11, line 53). Therefore, the luminance control unit (microcomputer 32) makes an initial setting of a shutter speed (shutter speed for image data to be stored in recording medium 44) which is set to a slowest possible value in order to utilize external illumination, and makes an initial duration of illumination of said illumination unit (period for flash**

emission Q) which is set to the shortest time which can provide a sufficient amount of light for image processing, when a predetermined time elapses since said amount of light becomes appropriate for suppressing disturbances in said image. Although the Sugimoto reference includes all of the above limitations, it fails to distinctly state that the sum total luminance value of all pixels in a field is compared to a predetermined threshold to see if they exceed the threshold. Rather, the Sugimoto reference compares a normalized luminance value to a threshold.

Tsuji discloses in figure 1 an electronic still camera including an automatic exposure processing section (27). The luminance signal (Y) from each pixel from a designated photometric area is supplied to the automatic exposure processing section (27) and is digitally added by the high-speed adding section (42) to obtain luminance addition data (TO) (col. 10, lines 4-11). An exposure control section (43) causes a validity determining section (47) to determine whether the luminance addition data (TO) is larger than a reference value s(Max) indicating a saturation state, or smaller than a reference value s(Min) indicating a dark state (col. 9, lines 30-36). If it is determined to be in either a saturation state or a dark state, exposure characteristics of the camera are adjusted (col. 9, lines 57-68; col. 10, line 66 – col. 11, line 24). Therefore, it would have been obvious for one skilled in the art to have been motivated to include the idea of controlling the exposure of a camera based on whether the sum total of luminance value of all pixels in a field is greater than a predetermined threshold value as disclosed by Tsuji in the camera that determines exposure period on the basis of a comparison between luminance evaluation value that is the normalization of the the sum of

Art Unit: 2612

luminance data equal to one screen and a threshold value. Doing so would provide a means for determining whether a sum total of luminance value of all pixels in a field is larger than a reference value indicating a saturation state (col. 9, lines 31-34).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 rejected under 35 U.S.C. 103(a) as being unpatentable over Sugimoto US 6,441,856 in view of Tsuji et al. US 5,223,935.

Re claim 1, Sugimoto discloses in figure 1 a digital camera (10) having a flash unit (38) that determines proper flash duration through an assessment of image luminance. The camera (10) includes a light emission unit (38) having at least one light-emitting element, and a microcomputer (32) that acts as an emission control unit for controlling the light-emitting element (38) (col. 7, lines 63-67). The camera (10) also includes an image-signal acquiring unit (14) for performing analog-to-digital conversion of the image to generate a digitized image signal and store the digitized image signal

Art Unit: 2612

(col. 5, lines 39-44). The camera includes a weighting circuit (22) to which one weighting amount table (28,30) is applied (col. 6, line 61 – col. 7, line 29). The weighting amount tables (28,30) apply weighting amount data (K) to different areas of the screen in order to suppress disturbances (areas of high luminance light source) in the image (col. 7, lines 1-7; lines 21-29). Next, an integrator (24) calculates a total sum of luminance data equal to one screen (col. 7, lines 36-40) and calculator (26) normalizes the integrated value to generate a luminance evaluation value (V_y) (col. 7, lines 43-47). A microcomputer (32) compares the luminance evaluation value (V_y) with a target evaluation value (V_t) and causes that flash lamp (38) to emit light if needed (col. 9, lines 21-67; col. 10, lines 1-12). The microcomputer (32) controls the shutter speed so that the luminance evaluation value (V_y) is consistent with the target evaluation value (V_t) (col. 9, lines 21-49). The microcomputer (32) also determines if the calculated shutter speed is lower than the minimum shutter speed (1/30 sec.) and in a case where the calculated shutter speed is lower than the minimum the shutter speed is forcedly set into the minimum value (col. 9, lines 33-49). Next, it is determined if the most suitable exposure is obtained at the controlled shutter speed and a light-emission is either performed (in accordance with calculated light-emission amount Q) or not performed depending on whether or not a suitable exposure is obtained (col. 10, lines 1-12). The controlled shutter speed and light emission are then used to take a picture of the object at the most suitable exposure and the image data obtained is stored into the recording medium (44) (col. 9, line 21 – col. 11, line 53). Therefore, the luminance control unit (microcomputer 32) makes an initial setting of a shutter speed (shutter speed for image

Art Unit: 2612

data to be stored in recording medium 44) which is set to a slowest possible value in order to utilize external illumination, and makes an initial duration of illumination of said illumination unit (period for flash emission Q) which is set to the shortest time which can provide a sufficient amount of light for image processing, when a predetermined time elapses since said amount of light becomes appropriate for suppressing disturbances in said image. Although the Sugimoto reference includes all of the above limitations, it fails to distinctly state that the sum total luminance value of all pixels in a field is compared to a predetermined threshold to see if they exceed the threshold. Rather, the Sugimoto reference compares a normalized luminance value to a threshold.

Tsuji discloses in figure 1 an electronic still camera including an automatic exposure processing section (27). The luminance signal (Y) from each pixel from a designated photometric area is supplied to the automatic exposure processing section (27) and is digitally added by the high-speed adding section (42) to obtain luminance addition data (TO) (col. 10, lines 4-11). An exposure control section (43) causes a validity determining section (47) to determine whether the luminance addition data (TO) is larger than a reference value s(Max) indicating a saturation state, or smaller than a reference value s(Min) indicating a dark state (col. 9, lines 30-36). If it is determined to be in either a saturation state or a dark state, exposure characteristics of the camera are adjusted (col. 9, lines 57-68; col. 10, line 66 – col. 11, line 24). Therefore, it would have been obvious for one skilled in the art to have been motivated to include the idea of controlling the exposure of a camera based on whether the sum total of luminance value of all pixels in a field is greater than a predetermined threshold value as disclosed

by Tsuji in the camera that determines exposure period on the basis of a comparison between luminance evaluation value that is the normalization of the the sum of luminance data equal to one screen and a threshold value. Doing so would provide a means for determining whether a sum total of luminance value of all pixels in a field is larger than a reference value indicating a saturation state (col. 9, lines 31-34).

Re claim 2, Sugimoto in view of Tsuji discloses all of the limitations of claim 1 above. In addition, Sugimoto states that the microcomputer (32) varies the shutter speed of the camera (10) in accordance with the luminance evaluation value (V_y) (col. 7, lines 52-60). Tsuji states that the f-number of the iris (19) may be varied depending on the luminance addition value (T_0) corresponding to the selected photometric area of the solid-state image sensing element. If the luminance addition value (T_0) is larger than $S(\text{Max})$ indicating a saturation state "overexposure", the iris (19) is set at f-number $F=22$ and the shutter speed is set to $S=1/500$ seconds (col. 9, line 57 – col. 10, line 65). Also, if the luminance addition value (T_0) is smaller than $S(\text{Min})$ indicating a dark state "underexposure", the iris (19) is set at f-number $F=2.8$ and the shutter speed is set to $S=1/30$ seconds (col. 10, line 66 – col. 11, line 68).

Re claim 3, see claim 2.

Art Unit: 2612

Re claim 4, see claim 1. The microcomputer (32) controls timing of the exposure of the CCD (12) and the light-emission of the flash lamp (38) on the basis of a shutter release instruction from a shutter release button (36) and the luminance evaluation value (V_y) (col. 7, lines 55-62).

Re claim 5, Tsuji discloses in figure 1 an electronic still camera including an automatic exposure processing section (27). The luminance signal (Y) from each pixel from a designated photometric area is supplied to the automatic exposure processing section (27) and is digitally added by the high-speed adding section (42) to obtain luminance addition data (TO) (col. 10, lines 4-11). An exposure control section (43) causes a validity determining section (47) to determine whether the luminance addition data (TO) is larger than a reference value $s(\text{Max})$ indicating a saturation state, or smaller than a reference value $s(\text{Min})$ indicating a dark state (col. 9, lines 30-36). The Examiner takes **Official Notice** that it is well known in the art that when a long exposure time causes a high-luminance portion of an image reaches a saturation state it is commonly referred to as "blooming" and that when a short exposure time causes an image to reach a dark state it is commonly referred to as "smearing". Therefore, the camera capable of exposure adjustment disclosed by Sugimoto in view of Tsuji automatically detects blooming or smearing based on the luminance of the image.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Contacts

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelly L. Jerabek whose telephone number is **(571) 272-7312**. The examiner can normally be reached on Monday - Friday (8:00 AM - 5:00 PM).

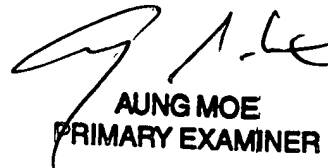
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on **(571) 272-7308**. The fax phone number for submitting all Official communications is 703-872-9306. The fax phone

Art Unit: 2612

number for submitting informal communications such as drafts, proposed amendments, etc., may be faxed directly to the Examiner at **(571) 273-7312**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KLJe



AUNG MOE
PRIMARY EXAMINER